

SEQUENCE LISTING

<110> Loma Linda University

<120> IRON-REGULATING PROTEIN-2 (IRP-2) IS  
DIAGNOSTIC FOR NEURODEGENERATIVE DISEASE

<130> LOMAU.140PR

<160> 20

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 189

<212> DNA

<213> Artificial Sequence

<220>

<223> cloning oligonucleotide

<400> 1

gcaatacaga atgcaccaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
ccacttaaag tgcagcctaa gaagcttccc tgcagaggcc agactacctg ccgaggatct 120  
tgtgattctg gagaactagg ccgaaactca ggaacatttt cttcgcagat tgagaataca 180  
cccatcctg 189

<210> 2

<211> 63

<212> PRT

<213> Artificial Sequence

<220>

<223> peptide for antibody production

<400> 2

Ala	Ile	Gln	Asn	Ala	Pro	Asn	Pro	Gly	Gly	Gly	Asp	Leu	Gln	Lys	Ala
1				5				10						15	
Gly	Lys	Leu	Ser	Pro	Leu	Lys	Val	Gln	Pro	Lys	Lys	Leu	Pro	Cys	Arg
			20					25					30		
Gly	Gln	Thr	Thr	Cys	Arg	Gly	Ser	Cys	Asp	Ser	Gly	Glu	Leu	Gly	Arg
		35					40					45			
Asn	Ser	Gly	Thr	Phe	Ser	Ser	Gln	Ile	Glu	Asn	Thr	Pro	Ile	Leu	
	50					55					60				

<210> 3

<211> 189

<212> DNA

<213> Artificial Sequence

<220>

<223> cloning oligonucleotide

<400> 3

gcaatacaga atgcaccaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
 ccacttaaag tgcagcctaa gaagcttccc gccagaggcc agactacctg ccgaggatct 120  
 tgtgattctg gagaactagg ccgaaactca ggaacatttt cttcgcatat tgagaatata 180  
 cccatcctg 189

<210> 4  
 <211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> peptide for antibody production

<400> 4  
 Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala  
 1 5 10 15  
 Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Cys Arg  
 20 25 30  
 Gly Gln Thr Thr (Cys) Arg Gly Ser Cys Asp Ser Gly Glu Leu Gly Arg  
 35 40 45  
 Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu  
 50 55 60

<210> 5  
 <211> 189  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> cloning oligonucleotide

<400> 5  
 gcaatacaga atgcaccaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
 ccacttaaag tgcagcctaa gaagcttccc tgcagaggcc agactaccgc ccgaggatct 120  
 tgtgattctg gagaactagg ccgaaactca ggaacatttt cttcgcatat tgagaatata 180  
 cccatcctg 189

<210> 6  
 <211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> peptide for antibody production

<400> 6  
 Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala  
 1 5 10 15  
 Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Cys Arg  
 20 25 30  
 Gly Gln Thr Thr (Ala) Arg Gly Ser Cys Asp Ser Gly Glu Leu Gly Arg  
 35 40 45  
 Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu  
 50 55 60

<210> 7  
<211> 189  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> cloning oligonucleotide

<400> 7  
gcaatacaga atgcacaaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
ccacttaaag tgcagcctaâ gaagcttccc tgcagaggcc agactacctg ccgaggatct 120  
gctgattctg gagaactagg ccgaaactca ggaacatttt cttcgcagat tgagaatata 180  
cccatcctg 189

<210> 8  
<211> 63  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> peptide for antibody production

<400> 8  
Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala  
1 5 10 15  
Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Cys Arg  
20 25 30  
Gly Gln Thr Thr Cys Arg Gly Ser Ala Asp Ser Gly Glu Leu Gly Arg  
35 40 45  
Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu  
50 55 60

<210> 9  
<211> 189  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> cloning oligonucleotide

<400> 9  
gcaatacaga atgcacaaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
ccacttaaag tgcagcctaa gaagcttccc gccagaggcc agactaccgc ccgaggatct 120  
tgtgattctg gagaactagg ccgaaactca ggaacatttt cttcgcagat tgagaatata 180  
cccatcctg 189

<210> 10  
<211> 63  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> peptide for antibody production

<400> 10  
Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala

1	5	10	15
Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Ala Arg			
20	25	30	
Gly Gln Thr Thr Ala Arg Gly Ser Cys Asp Ser Gly Glu Leu Gly Arg			
35	40	45	
Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu			
50	55	60	

<210> 11  
 <211> 189  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> cloning oligonucleotide

<400> 11  
 gcaatacaga atgcacaaaa tcttgagggt ggtgacctgc agaaagcagg aaagctctct 60  
 ccacttaaag tgcagcctaa gaagcttccc tgcagaggcc agactaccgc ccgaggatct 120  
 gctgattctg gagaactagg ccgaaactca ggaacatttt cttcgcatat tgagaatata 180  
 cccatcctg 189

<210> 12  
 <211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> peptide for antibody production

1	5	10	15
Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala			
20	25	30	
Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Cys Arg			
35	40	45	
Gly Gln Thr Thr Ala Arg Gly Ser Ala Asp Ser Gly Glu Leu Gly Arg			
50	55	60	
Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu			

<210> 13  
 <211> 189  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> cloning oligonucleotide

<400> 13  
 gcaatacaga atgcacaaaa tcttgagggt ggtgacctgc agaaagcagg aaagctctct 60  
 ccacttaaag tgcagcctaa gaagcttccc gccagaggcc agactacctg ccgaggatct 120  
 gctgattctg gagaactagg ccgaaactca ggaacatttt cttcgcatat tgagaatata 180  
 cccatcctg 189

<210> 14

<211> 63  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> peptide for antibody production

<400> 14  
Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala  
1 5 10 15  
Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Ala Arg  
20 25 30  
Gly Gln Thr Thr Cys Arg Gly Ser Ala Asp Ser Gly Glu Leu Gly Arg  
35 40 45  
Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu  
50 55 60

<210> 15  
<211> 189  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> cloning oligonucleotide

<400> 15  
gcaatacaga atgcacaaaa tcctggaggt ggtgacctgc agaaagcagg aaagctctct 60  
ccacttaaag tgcagcctaa gaagcttccc gccagaggcc agactaccgc ccgaggatct 120  
gctgattctg gagaactagg ccgaaactca ggaacatttt cttcgcatat tgagaatata 180  
cccatcctg 189

<210> 16  
<211> 63  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> peptide for antibody production

<400> 16  
Ala Ile Gln Asn Ala Pro Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala  
1 5 10 15  
Gly Lys Leu Ser Pro Leu Lys Val Gln Pro Lys Lys Leu Pro Ala Arg  
20 25 30  
Gly Gln Thr Thr Ala Arg Gly Ser Ala Asp Ser Gly Glu Leu Gly Arg  
35 40 45  
Asn Ser Gly Thr Phe Ser Ser Gln Ile Glu Asn Thr Pro Ile Leu  
50 55 60

<210> 17  
<211> 2867  
<212> DNA  
<213> Homo Sapiens

<400> 17











```

aaaatgcaga ttccttgggc ctctccggca gagaagtatt ttctttatca tttcctgaag 2760
aactctttcc tggaattacg ttaaataata agacgagcac tggcaaagag ttcagcgtga 2820
ttgcagcatt tgaaaatgat gtggagataa ctttgtacaa acatggagga ttgttaaact 2880
ttgtggctcg aaaattctta tagtatctac tccccatggg atctttcatg gctggtaact 2940
gcaaagcctt cttctgtgct ggaccagga atcattgcc aacgtagtga ctaaaatgaa 3000
gtatacttct ctcctccatg gatgtaaatg ataacgaatc aacgtagtga ctaaaatgaa 3060
atcttgattt taaataatat acgaatgggt ctattaacat tgctaaaatc aacgtgtgaa 3120
gggtgtgtgt ggaagagacc tgtaagtatg gggggtatat tttatgagaa cattttgtaa 3180
ataaagacag aatttgaact tgtgttgaag attcatatga atagccgttc taaagctgtt 3240
tgttttgttt tgcaccttaa aactggacta ctgtttgttg gtttaagaat agcaagttga 3300
tttagaagaa gccagactag atcctaaaat tatggaaatg ggtacctgat ttagaaatga 3360
atttttaaat gtttttcttt ccagaattga attggacaca attggcattt ccagtttgta 3420
atgtaagtca ggtttggcct tagtctcaat acatctgcaa ggcatagaac ctgccccaga 3480
tcacagtccc tctgaccagc caaatgtcc tccatgtctg cagataaatg actgtaaaat 3540
acagctgatt gtgtgttacc gtgtattagt aagaatatat ttcctgtggt atagccctgt 3600
aattttttca gtaacttgcc actatgacct actcacaagc ccaaatacgg tgtattaatt 3660
tggaactagat tttgtctcatt ttacatgact gtaactctg taacctcaat taggaatcac 3720
tagctgacat tccacactcc ttttatgact gctggaaaca attgagtcaa 3770

```

<210> 20  
 <211> 963  
 <212> PRT  
 <213> Rattus Norvegicus

```

<400> 20
Met Asp Ser Pro Ser Ala Gly Tyr Thr Phe Glu Tyr Leu Ile Glu Thr
 1          5          10          15
Leu Asn Gly Ser Ser Gln Lys Lys Phe Phe Asn Val Pro Lys Leu Gly
 20          25          30
Gly Thr Lys Tyr Asp Ile Leu Pro Tyr Ser Ile Arg Val Leu Leu Glu
 35          40          45
Ala Ala Val Arg Asn Cys Asp Gly Phe Leu Met Lys Lys Glu Asp Val
 50          55          60
Ile Asn Ile Leu Asp Trp Lys Thr Lys Gln Ser Asn Val Glu Val Pro
 65          70          75          80
Phe Phe Pro Ala Arg Val Val Leu Gln Asp Phe Thr Gly Ile Pro Ala
 85          90          95
Met Val Asp Phe Ala Ala Met Arg Glu Ala Met Lys Thr Leu Gly Gly
100          105          110
Asp Pro Lys Lys Val His Pro Ala Cys Pro Thr Asp Leu Thr Val Asp
115          120          125
His Ser Leu Gln Ile Asp Phe Ser Lys Cys Ala Ile Gln Asn Ala Pro
130          135          140
Asn Pro Gly Gly Gly Asp Leu Gln Lys Ala Gly Lys Leu Ser Pro Leu
145          150          155          160
Lys Val Gln Pro Lys Lys Leu Pro Cys Arg Gly Gln Thr Thr Cys Arg
165          170          175
Gly Ser Cys Asp Ser Gly Glu Leu Ser Arg Asn Ser Gly Thr Phe Ser
180          185          190
Ser Gln Ile Glu Asn Thr Pro Val Leu Cys Pro Phe His Leu Gln Pro
195          200          205
Val Pro Glu Pro Glu Thr Val Leu Lys Asn Gln Glu Val Glu Phe Gly
210          215          220
Arg Asn Arg Glu Arg Leu Gln Phe Phe Lys Trp Ser Ser Gly Ala Phe
225          230          235          240
Lys Asn Val Ala Val Ile Pro Pro Gly Thr Gly Met Ala His Gln Val
245          250          255

```

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121  
122  
123  
124  
125  
126  
127  
128  
129  
130  
131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144  
145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167  
168  
169  
170  
171  
172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400



